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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,370	08/23/2004	Markus Scherer	255880US0PCT	7127
22850 7590 05/16/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BERNSHTEYN, MICHAEL	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			05/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/505,370	Applicant(s) SCHERER ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 28 and 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8, 11-15, 21-29 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28 and 42 is/are allowed.
- 6) ☒ Claim(s) 2-8, 11-15, 21-27, 29 and 31-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/17/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action follows a response filed on March 14, 2008. Claim 13 has been amended; claim 30 has been cancelled without prejudice; claims 31-42 have been added.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 14, 2008 has been entered.
3. Claims 2-8, 11-15 and 21-42 are pending.

Claim Rejections - 35 USC § 103

4. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 2-8, 11-15, 21-27, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaubert (EP 0682 046 A1) in view of Mueller et al. (U. S. Patent 5,098,550), for the rationale recited in paragraph 7 of Office Action dated on September 14, 2007.
6. Claims 14 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (U. S. Patent 5,098,550) in view of Schaubert (EP 0682 046 A1).

With regard to the limitations of instant claims 14 and 31-38, Mueller discloses a method for the solvent dewaxing of petroleum products containing wax, particularly of **petroleum oil distillates**, by the use of **at least one solvent** suitable for dewaxing and of a polymeric dewaxing aid comprising a polyacrylate, the products to be dewaxed being mixed with the solvent and the polymeric dewaxing aid, the mixture obtained being chilled, and the precipitated wax being separated, which method is characterized in that the dewaxing aid used is a polymer mixture.

With regard to the petroleum stocks, which are amenable to dewaxing, the method does not appear to have any definite limitations. From a practical point of view, however, it is particularly well suited for waxy distillate oils, especially those with a boiling range from about 300⁰C to about 600⁰C, a density of about 0.08 to 0.09 g/cc at 15⁰C, a viscosity of about 10 to 20 cSt/100⁰C, a pour point of about 30⁰C to 50⁰C, and a dry wax content of about 10 to about 25 weight percent. Most desirable are distillate oil fractions, which include lubricating oils and specialty oils boiling within the range of 300⁰C to 600⁰C, and preferably those with a mid-boiling point of about 400⁰C to 450⁰C (col. 2, line 19 through col. 4, line 55).

With regard to the limitations of instant claims 14 and 31-37, Mueller does not disclose that the dewaxing additive comprises in polymerizable form the free-radically polymerizable monomers of Formulae A and B.

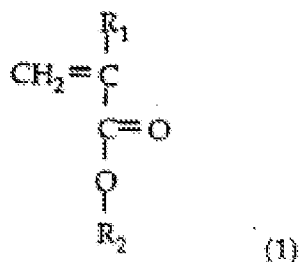
Schauber discloses a copolymer comprising (meth) acrylate monomers and styrenic monomer(s) in an oil soluble diluent to form a solution of the copolymer in the

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oil soluble diluent, and wherein the solution includes less than or equal to 1000 parts by weight residual styrene monomer(s) per one million parts by weight solution (abstract).

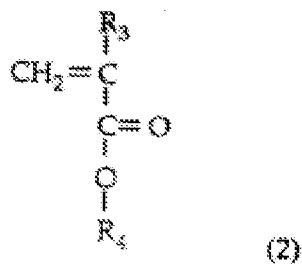
With regard to the limitations of instant claims 14 and 31-37, Schaubert discloses the monomer mixture comprising (col. 1, line 45 through col. 3, line 3):

From about 5 parts by weight (pbw) to about 70 pbw of one or more (meth) acrylate monomer having the structural formula (1):



wherein: each R_1 is independently H or CH_3 ; and each R_2 is independently selected from $(C_{18}-C_{24})$ alkyl;

from about 5 pbw to about 85 pbw of one or more(meth) acrylate monomer having the structural formula (2):



wherein: each R_1 is independently H or CH_3 ; and each R_2 is independently selected from (C_7-C_{15}) alkyl; and

from about 5 pbw to about 50 pbw of one or more styrenic monomer; and

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b). polymerizing from about 2 pbw to about 20 pbw, for example from about 2 pbw to about 10 pbw, additional (meth)acrylate monomer(s) per 100 pbw of the combined (meth)acrylate monomers of formulae (1) and (2) of the monomer mixture, said additional (meth)acrylate monomer(s) comprising one or more (meth)acrylate monomer of formula (1), one or more (meth)acrylate monomer of formula (2), or a mixture thereof, in the presence of the polymerization intermediate, provided that the combined monomers of the monomer mixture and additional monomer(s) comprise from about 5 wt% to about 70 wt% of the (meth)acrylate monomer(s) of formula (1), from about 5 wt% to about 85 wt% of the (meth)acrylate monomer(s) of formula (2) and from about 5 wt% to about 50 wt% of the styrenic monomer(s), to provide a solution of from about 30 weight percent to about 90 weight percent of a viscosity index improving copolymer in the dilu-

ent, said solution including less than or equal to 1000 pbw residual styrene monomer(s) per 1,000,000 pbw solution.

Both formulas (1) and (2) are substantially identical to the claimed formulas A and B.

With regard to the limitations of instant claims 40 and 41, Schaubert discloses that the terminology "(meth)acrylate" is used to generally refer to acrylate esters, methacrylate esters, and mixtures thereof. Commercially available alkyl (meth)acrylate monomers typically are mixture of esters. As used herein, (C₁₈-C₂₄) alkyl means any straight or branched alkyl group having 16 to 24 carbon atoms per group, e.g., stearyl, cetyl, heptadecyl, nonadecyl, eicosyl (col. 3, lines 19-33).

It is well known, that the claimed behenyl acrylate is C₂₀ alkyl, thus it is within the scope of the above mentioned group of (C₁₈-C₂₄) alkyl (meth)acrylate monomers.

Schaubert also discloses that in a preferred embodiment, the styrenic monomer is styrene (col. 4, lines 20-21)

Both references are analogous art because they are from the same field of endeavor concerning new polymer additives.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Schaubert's polymer composition, and particular copolymer of behenyl acrylate and styrene into Mueller's method for the solvent dewaxing of petroleum products containing wax, particularly of petroleum oil distillates because the usage of such composition improves viscosity index and pour point lowering for lubricating oil composition (EP'046, col. 7, lines 38-45), and the results obtained with mixtures of the polymers P1 and P2 show that the use of **polyalkyl methacrylate** components with moderately high degrees of branching of the alkyl groups results in significantly greater effectiveness and more pronounced synergistic effects (US'550, col. 4, lines 39-45), and thus to arrive at the subject matter of instant claim 14 and dependent claims 31-37, 40 and 41.

With regard to the limitations of instant claims 38 and 39, Mueller discloses that The most widely used commercial process for the dewaxing of waxy petroleum oils employs solvents, mainly low-boiling aliphatic hydrocarbons such as pentane, hexane, heptane, octane, etc.; ketones such as acetone, methylethyl ketone, methylisobutyl ketone, etc.; aromatic hydrocarbons such as benzene, toluene, xylene, etc.; and mixtures of solvents. Here, too, the wax-containing oil which has been mixed with the solvent is chilled until the wax precipitates in the form of fine particles (col. 1, lines 21-30).

7. Claims 14 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (U. S. Patent 5,098,550) in view of Neunier et al. (U. S. Patent 4,758,365).

The disclosure of Mueller's reference resided in § 6 is incorporated herein by reference.

With regard to the limitations of instant claims 14 and 31-38, Mueller does not disclose that the dewaxing additive comprises in polymerizable form the free-radically polymerizable monomers of Formulae A and B.

With regard to the limitations of instant claims 14 and 32, Neunier discloses polymeric additives useful for inhibition of the deposit of paraffins and improvement of the flow properties of crude oils and to compositions containing crude oils and such additives. The polymeric additive consists of a polymer formed by units derived from one or more alkyl esters of unsaturated monocarboxylic acids, one or more unsaturated alpha, beta-dicarboxylic compounds in the form of diacids, low alkyl diesters or anhydrides and one or more monomers having ethylenic unsaturation of the general formula $\text{CH}_2=\text{CZ}_1\text{Z}_2$, in which Z_1 and Z_2 are the same or different and represent hydrogen, a halogen, a saturated, unsaturated or aromatic hydrocarbon group or an ester or ether group. Compounds containing a crude oil and 5 to 4000 ppm and preferably 100 to 1500 ppm of the additive have much improved flow properties (abstract).

This formula is substantially identical to the claimed formulas A and B.

With regard to the limitations of instant claim 33, Neunier discloses that the additive is a polymer which contains by weight 20% to 99% and preferably 60% to 90% of units derived from one or more alkyl esters of unsaturated monocarboxylic acids, 0.5% to 40% and preferably 5% to 20% of units derived from one or more unsaturated α , β -dicarboxylic compounds and 0.5% to 40% and preferably 5% to 20% of units derived from one or more monomers having ethylenic unsaturation of the general formula (col. 2, lines 28-38).

With regard to the limitations of instant claims 34-37, 40 and 41, Neunier discloses that among alkyl esters of unsaturated monocarboxylic acids, use is preferably made of long straight-chain n-alkylacrylates and methacrylates, ranging in general from C₁₂ to C₃₀. These esters can be obtained by the reaction of acrylic or methacrylic acid or their esters with straight chain aliphatic alcohols having at least 12 carbon atoms. The upper limit of 30 carbon atoms is imposed by the chain length of the aliphatic alcohols at present available commercially. Available aliphatic alcohols are mixtures of alcohols of different chain lengths, the distribution of which is in general in the following ranges by weight:

$$0 < C_{12} - C_{16} < 10\%$$

$$0 < C_{16} - C_{18} < 40\%$$

$$50 < C_{20} - C_{22} < 100\%$$

$$0 < C_{24} - C_{30} < 10\% \text{ (col. 3, lines 40-60).}$$

Both references are analogous art because they are from the same field of endeavor concerning new polymer additives.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Meunier's polymer composition, and particular copolymer of behenyl acrylate and styrene into Mueller's method for the solvent dewaxing of petroleum products containing wax, particularly of petroleum oil distillates for inhibiting the deposit of paraffins and improving the flow properties of crude oils (US'365, abstract), and the results obtained with mixtures of the polymers P1 and P2 show that the use of **polyalkyl methacrylate** components with moderately high degrees of branching of the alkyl groups results in significantly greater effectiveness and more pronounced synergistic effects (US'550, col. 4, lines 39-45), and thus to arrive at the subject matter of instant claim 14 and dependent claims 31-37, 40 and 41.

With regard to the limitations of instant claims 38 and 39, Mueller discloses that The most widely used commercial process for the dewaxing of waxy petroleum oils employs solvents, mainly low-boiling aliphatic hydrocarbons such as pentane, hexane, heptane, octane, etc.; ketones such as acetone, methylethyl ketone, methylisobutyl ketone, etc.; aromatic hydrocarbons such as benzene, toluene, xylene, etc.; and mixtures of solvents. Here, too, the wax-containing oil which has been mixed with the solvent is chilled until the wax precipitates in the form of fine particles (col. 1, lines 21-30).

8. Claims 14 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (U. S. Patent 5,098,550) in view of Esso Co. (GB 906, 412).

The disclosure of Mueller's reference resided in § 6 is incorporated herein by reference.

With regard to the limitations of instant claims 14 and 31-38, Mueller does not disclose that the dewaxing additive comprises in polymerizable form the free-radically polymerizable monomers of Formulae A and B.

With regard to the limitations of instant claims 31-36, 40 and 41, GB'412 discloses a process for preparing oil-soluble copolymers of one or more esters (A) of an α,β -unsaturated dicarboxylic acid and a heavy alcohol and one or more esters (B) of such an acid and a light alcohol, which consists in carrying out the copolymerization in two stages (claim 1, page 5, lines 18-30). GB'412 discloses the same monomers (pages 1 and 2), the method of polymerization for the preparation additives for lubricating oil as instantly claimed (page 2, lines 110-130).

With regard to the limitations of instant claim 37, GB'412 discloses that the copolymer consists of from 40 to 60% by weight of esters (A) and correspondingly from 60 to 40% by weight of esters (B) which is within the claimed range (claim 7, page 6, lines 11-14).

Both references are analogous art because they are from the same field of endeavor concerning new polymer additives.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Esso's polymer composition, and particular copolymer of behenyl acrylate and styrene into Mueller's method for the solvent dewaxing of petroleum products containing wax, particularly of petroleum oil distillates for lowering the pour point and improving the viscosity index of lubricating oils (GB'412, page 2, lines 32-33), and the results obtained with mixtures of the polymers

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P1 and P2 show that the use of **polyalkyl methacrylate** components with moderately high degrees of branching of the alkyl groups results in significantly greater effectiveness and more pronounced synergistic effects (US'550, col. 4, lines 39-45), and thus to arrive at the subject matter of instant claim 14 and dependent claims 31-37, 40 and 41.

With regard to the limitations of instant claims 38 and 39, Mueller discloses that The most widely used commercial process for the dewaxing of waxy petroleum oils employs solvents, mainly low-boiling aliphatic hydrocarbons such as pentane, hexane, heptane, octane, etc.; ketones such as acetone, methylethyl ketone, methylisobutyl ketone, etc.; aromatic hydrocarbons such as benzene, toluene, xylene, etc.; and mixtures of solvents. Here, too, the wax-containing oil which has been mixed with the solvent is chilled until the wax precipitates in the form of fine particles (col. 1, lines 21-30).

9. Claims 14 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (U. S. Patent 5,098,550) in view of Liesen et al. (EP 1 086 964 A2).

The disclosure of Mueller's reference resided in § 6 is incorporated herein by reference.

With regard to the limitations of instant claims 14 and 31-38, Mueller does not disclose that the dewaxing additive comprises in polymerizable form the free-radically polymerizable monomers of Formulae A and B.

With regard to the limitations of instant claims 31-38, Liesen discloses a polyalkyl (meth)acrylate copolymer obtainable by polymerizing a monomer composition

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comprising: (A) from about 5 to about 60 weight percent of C₁₁-C₁₅ alkyl(meth) acrylate; and (B) from about 95 to about 40 weight percent of a C₁₆-C₃₀ alkyl(meth) acrylate. This composition can be effective as a pour point depressant and can also improve the low temperature viscosity of an oil lubricating viscosity (abstract, Example 9, pages 9-10, [0071]).

Both references are analogous art because they are from the same field of endeavor concerning new polymer additives.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Liesen's polymer composition, and particular copolymer of behenyl acrylate and styrene into Mueller's method for the solvent dewaxing of petroleum products containing wax, particularly of petroleum oil distillates because such composition can be effective as a pour point depressant and can also improve the low temperature viscosity of an oil lubricating viscosity (EP'964, abstract, Example 9, pages 9-10, [0071]), and the results obtained with mixtures of the polymers P1 and P2 show that the use of **polyalkyl methacrylate** components with moderately high degrees of branching of the alkyl groups results in significantly greater effectiveness and more pronounced synergistic effects (US'550, col. 4, lines 39-45), and thus to arrive at the subject matter of instant claim 14 and dependent claims 31-37, 40 and 41.

With regard to the limitations of instant claims 38 and 39, Mueller discloses that The most widely used commercial process for the dewaxing of waxy petroleum oils employs solvents, mainly low-boiling aliphatic hydrocarbons such as pentane, hexane,

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heptane, octane, etc.; ketones such as acetone, methylethyl ketone, methylisobutyl ketone, etc.; aromatic hydrocarbons such as benzene, toluene, xylene, etc.; and mixtures of solvents. Here, too, the wax-containing oil which has been mixed with the solvent is chilled until the wax precipitates in the form of fine particles (col. 1, lines 21-30).

Allowable Subject Matter

10. Claims 28 and 42 would be allowable if rewritten in independent form and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the present claims are allowable over the closest references: Mueller et al. (U. S. Patent 5,098,550) and Schaubert (EP 0682 046 A1).

Mueller et al. and Schaubert do not disclose or fairly suggest the instantly claimed the dewaxing additive, which consist of a copolymer of behenyl acrylate and styrene as per claim 28, and the method for solvent depaffinization of paraffinix mineral oil distillates, wherein the dewaxing additive consists of a copolymer of behenyl acrylate and styrene as per claim 42.

Response to Arguments

11. Applicant's arguments filed on March 14, 2008 have been fully considered but they are not persuasive.

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12. It appears that the focal Applicants argument resides in the contention that Schauber and Mueller are in different fields of endeavor and are not both in the field of new polymer dewaxing additives. Dewaxing additives are very different from pour point depressants, and accordingly, it is improper to combine both references (page 11, 1st paragraph). A pour point depressant is used to improve the low temperature properties of lubricants whereas a dewaxing aid is used to improve the process in a refinery. The latter one includes the step of cutting of the wax as completely as possible from the oil. The dewaxing aid will be removed together with the wax. The dewaxed oil is then more or less free of dewaxing aid. In contrast, a pour point depressant is not meant to remove anything it only changes the physical properties and stays within the lubricant (page 12).

13. It is noted that Schauber discloses that his invention is concerned with viscosity index improving additives for **lubricating oils**. Lubricating oil compositions for internal combustion engines typically include polymeric additives for improving the viscosity index of the lubricating composition, that is, modifying the relationship between temperature and the viscosity of the oil composition to reduce the temperature dependence of the viscosity and to lower the 'pour point" of the composition, that is, to allow the composition to remain fluid at reduced temperature (page 1, lines 1-14). Schauber discloses that suitable lubricating oil base stocks include **paraffinic** and naphthelic neutral **oils** (col. 7, lines 43-45).

Muller discloses a method for dewaxing, and particularly for solvent dewaxing, **petroleum** products containing wax by the use of dewaxing aids comprising a polyacrylate. It is well known that liquid petroleum is also known as paraffin oil (see, for

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example, Richard J. Lewis Sr. "Hawley's Condensed Chemical Dictionary", 14th Edition, John Wiley & Sons, Inc., 2001, p. 835). Thus, it is examiner position that Schaubert's reference is clearly within Applicants' field of endeavor.

14. Furthermore, in response to applicant's arguments, that Schaubert discloses viscosity index improving copolymers (see the abstract) and not a mixture of dewaxing additives (pages 11-12, the bridging paragraph) has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The purpose of intended use of a claimed invention which do not result in a structural difference between the claimed invention and the prior art do not limit the claim and do not distinguish over the prior art apparatus (or process). See, e.g., *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963); *In re Sinex*, 309 F.2d 488, 492, 135 USPQ 302, 305 (CCPA 1962). If the prior art structure is capable of performing the intended use as recited in the preamble, that it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ 2d. 1429, 1431 (Fed. Cir. 1997) and cases cited therein, as it has been held that the recitation of a new intended use for an old product does not make a claim to that old product patentable. *In re Schreiber*, 44 USPQ 2d. 1429 (Fed. Cir. 1997). See also MPEP 2111.02 and 2112-2112.02.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
Examiner, Art Unit 1796

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/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796